

Transfer of *Campylobacter jejuni* from raw to cooked chicken via wood and plastic cutting boards.

Abstract

Aims: We quantified *Campylobacter jejuni* transferred from naturally contaminated raw chicken fillets and skins to similar cooked chicken parts via standard rubberwood (RW) and polyethylene cutting boards (PE). **Methods and Results:** RW and PE cutting boards (2.5×2.5cm²) were constructed. RW surfaces were smooth and even, whereas PE was uneven. Scoring with scalpel blades produced crevices on RW and flaked patches on the PE boards. Raw chicken breast fillets or skin pieces (10g) naturally contaminated with *Camp. jejuni* were used to contaminate the cutting boards (6.25cm²). These were then briefly covered with pieces of cooked chicken. *Campylobacter jejuni* on raw chicken, the boards, and cooked chicken pieces were counted using a combined most-probable-number (MPN)-PCR method. The type of cutting board (RW, PE; unscored and scored) and temperature of cooked chicken fillets and skins were examined. Unscored PE and RW boards were not significantly different in regards to the mean transfer of *Camp. jejuni* from raw samples to the boards. The mean transfer of *Camp. jejuni* from scored RW was significantly higher than from scored PE. When the chicken fillets were held at room temperature, the mean transfer of *Camp. jejuni* from scored RW and PE was found to be 44.9 and 40.3%, respectively. **Conclusions:** RW and PE cutting boards are potential vehicles for *Camp. jejuni* to contaminate cooked chicken. Although cooked chicken maintained at high temperatures reduced cross-contamination via contaminated boards, a risk was still present. **Significance and Impact of the Study:** Contamination of cooked chicken by *Camp. jejuni* from raw chicken via a cutting board is influenced by features of the board (material, changes caused by scoring) and chicken (types of chicken parts and temperature of the cooked chicken). © 2011 The Authors. Letters in Applied Microbiology © 2011 The Society for Applied Microbiology.

Keyword: *Campylobacter jejuni*; Cooked chicken; Cross-contamination; Cutting boards.